

No Need To Get Wise To The Surprise Index

Exchanges and private trading networks seek to develop new markets for others to come and play in; this is all well and good for any industry not trying to grow is acquiescing in its own slow death. However, product development is such a hit-and-miss affair and is done at such high cost to the developers you really have to wonder how they can launch so many, um, suboptimal ideas at a trading community expecting failure. You would think enough spaghetti thrown at enough walls would lead to a strand or two sticking, but maybe what we have is greasy spaghetti and tile walls.

Take the attempt to launch auction markets on economic data back in 2006. The idea was simple; as markets are moved by releases of non-farm payroll data, core CPI, Institute for Supply Management indices, etc, institutional traders could put their money where their institutional mouths were and be rewarded for their forecasts as opposed to how the markets moved after the forecasts.

I attended a pre-launch presentation featuring a fellow market pundit. A question arose from the audience, "But that would mean they would have to trade against their own economists' forecasts! Would they do that?" The speaker's eyes and mine met and it was all we could do to avoid dissolving into laughter.

Surprise Indices

Old ideas die hard and bad ideas never seem to die at all. The urge to peg objective reality to economists' subjective musings has found new life in the form of economic surprise indices. The idea here is very straightforward and familiar to anyone who follows the expectations games played by political spin-doctors and corporate investor relations managers: Judge economic news not by any objective standard but against a set of expectations or forecasts. As political candidacies have been destroyed in Iowa and New Hampshire and as stock prices either have surged or stumbled based on performance relative to these managed targets, we are in that worst of all possible worlds for economists, one involving accountability. Oh for the days when the Iron Law of Forecasting prevailed: Give 'em a number or give 'em a date, but don't ever give 'em both.

Let's focus on one of the surprise indices, the Citigroup Economic Surprise index for the U.S. (CESI) and pose the very simple question of whether it leads a set of financial market indicators or not. As the CESI is calculated daily and economic variables are produced at much lower frequencies such as monthly or quarterly and are frequently revised after their initial report, a parallel question of whether the CESI has any value whatsoever as a macroeconomic forecasting tool would be unfair.

For the sake of completeness, the CESI is defined by *Bloomberg* as weighted historical standard deviations of data surprises, or the actual release versus the median response by various forecasters. The indices are calculated daily in a rolling three-month window. The weights of economic indicators are derived from relative high-frequency spot foreign exchange impacts of a one standard deviation data surprise and employ a time-decay function to replicate the limited memory of the markets.

In the old days, traders looked at their screens, gulped, had their stops run and then got on with the rest of their day. We are so much more advanced now.

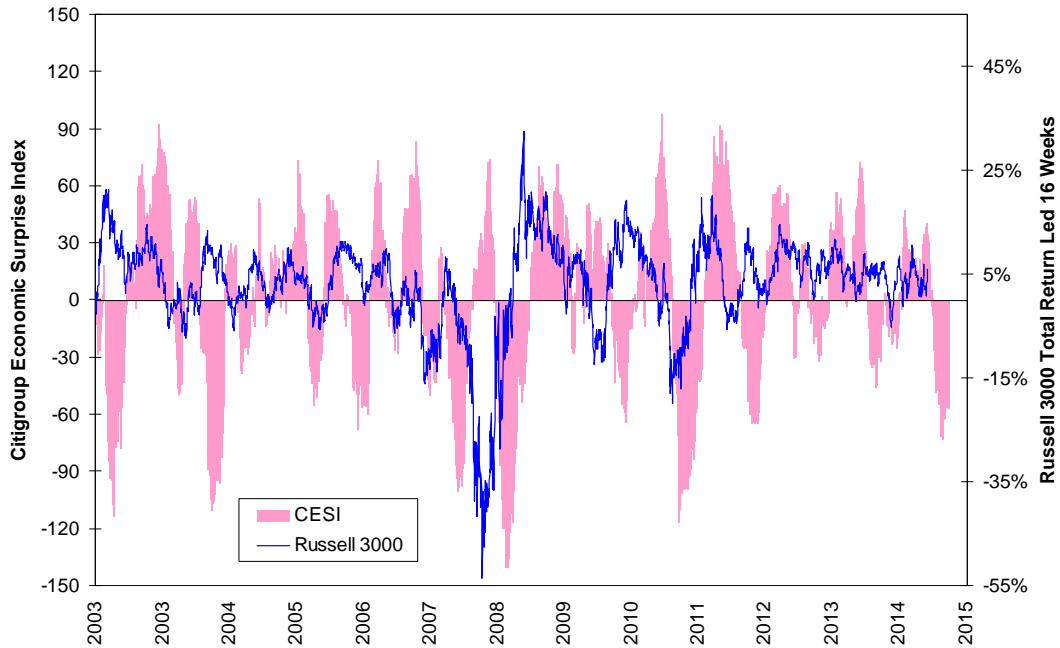
Market Indications

Let's take a set of five markets and examine the relationship between them and the CESI. These will be the total return indices for the Russell 3000, 7-10 year Treasuries, investment-grade and high-yield corporate bonds and the Bloomberg industrial metals index. The presumption is a stronger CESI should benefit both the Russell 3000 and Bloomberg industrial metals indices and a weaker CESI should benefit the bond indices.

The correlations between the CESI and these markets were examined in one-week increments from the January 2003 inception of the CESI. The lead-times for the Russell 3000 index and the Bloomberg industrial metals index were 16 and 17 weeks, respectively. The lead-times for the 7-10 year Treasuries, high-yield and investment-grade bonds were all one week. None of these relationships were statistically significant.

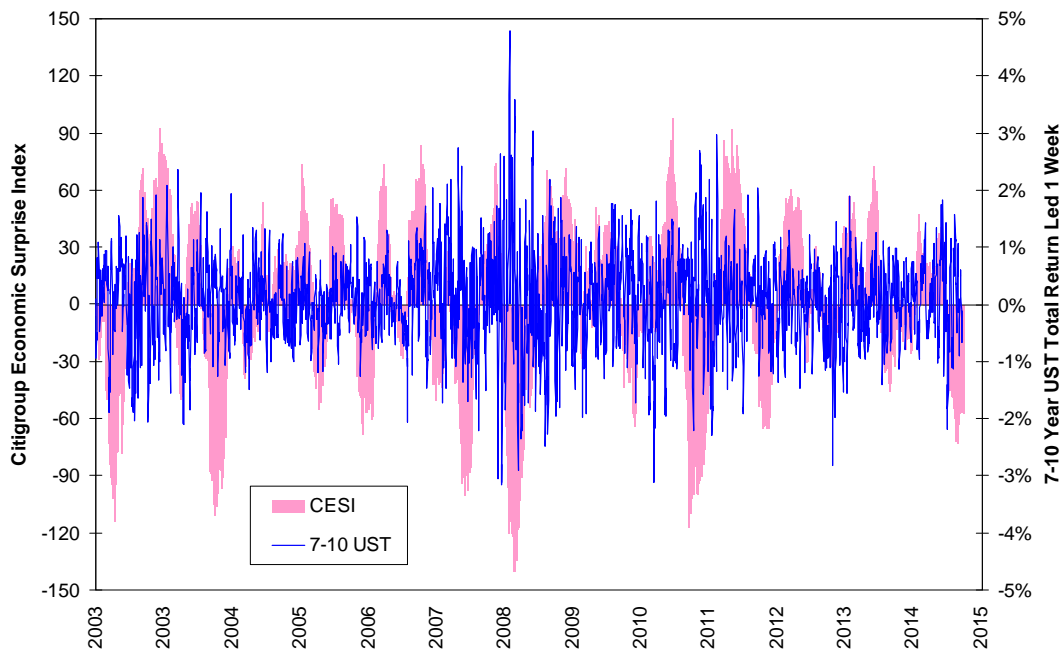
If we map the CESI against these total return indices at their calculated lead-times, we can and indeed should be surprised at the extent to which the CESI is out of synch with the markets. U.S. equities went through a boom, a horrendous bust and another boom over the life-to-date of the CESI and yet we would be hard-pressed indeed to find much the CESI biased higher and lower during the bullish and bearish phases, respectively.

U.S. Equity Response To Economic Surprise Index



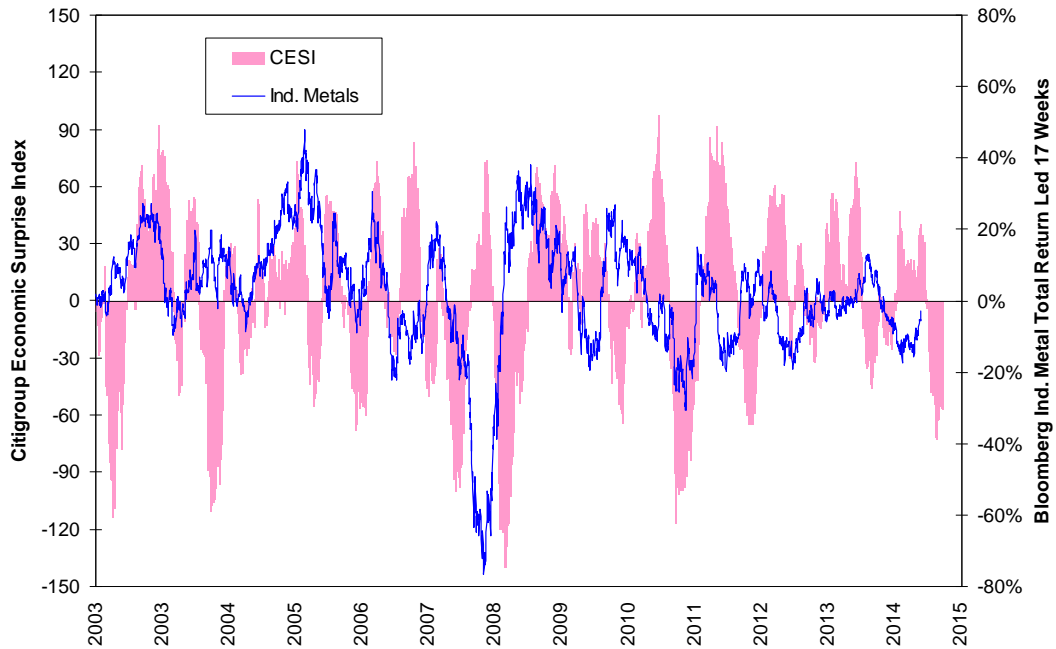
The picture for 7-10 year Treasuries is more disconnected from reality than it was for equities, and it does not even produce some anecdotal examples of strong bond returns associated with weak CESI readings and vice-versa. Why should a relationship exist in the post-crisis era? The largest holders of U.S. Treasury securities are the Federal Reserve, the Bank of Japan and the Peoples' Bank of China. None fall into the flash-boy classification and all three have printing presses. Are they going to unload their policy-driven holdings because of some anomalous reading on a surprise index? That would be surprising.

7-10 Year Treasury Response To Economic Surprise Index



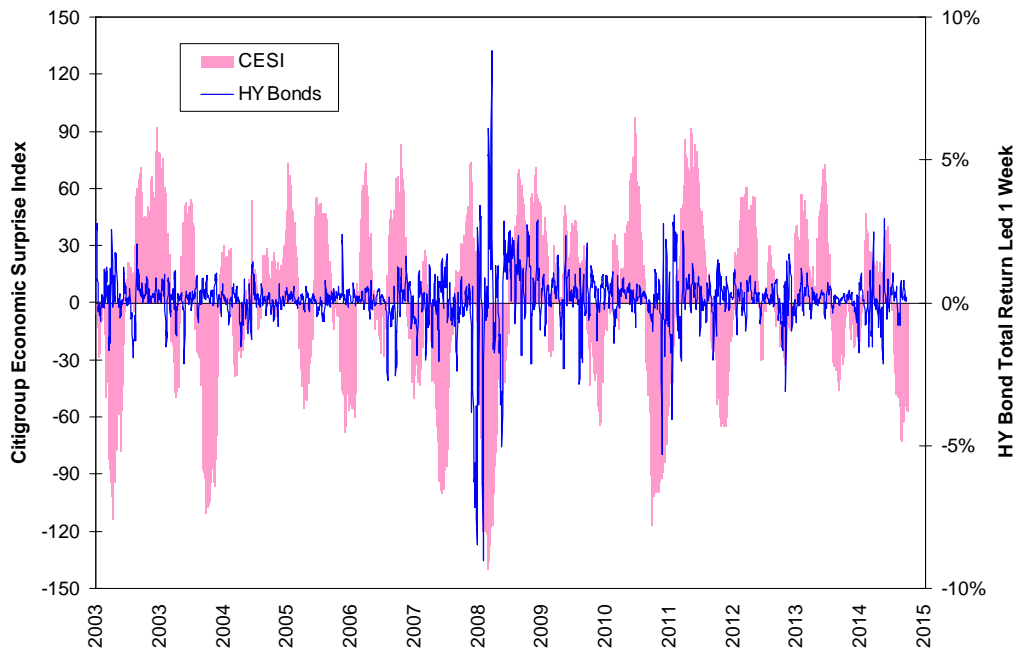
Given the driving role of China in industrial metals markets, we should not expect the CESI to drive the Bloomberg industrial metals market much, and we are not disappointed in this regard. The direct relationship was a little bit stronger before the financial crisis when Chinese import demand and U.S. economic data just happened to align, but this relationship broke badly after the financial crisis when increases in global mine production started to put consistent downward pressure on the industrial metals.

Industrial Metal Response To Economic Surprise Index

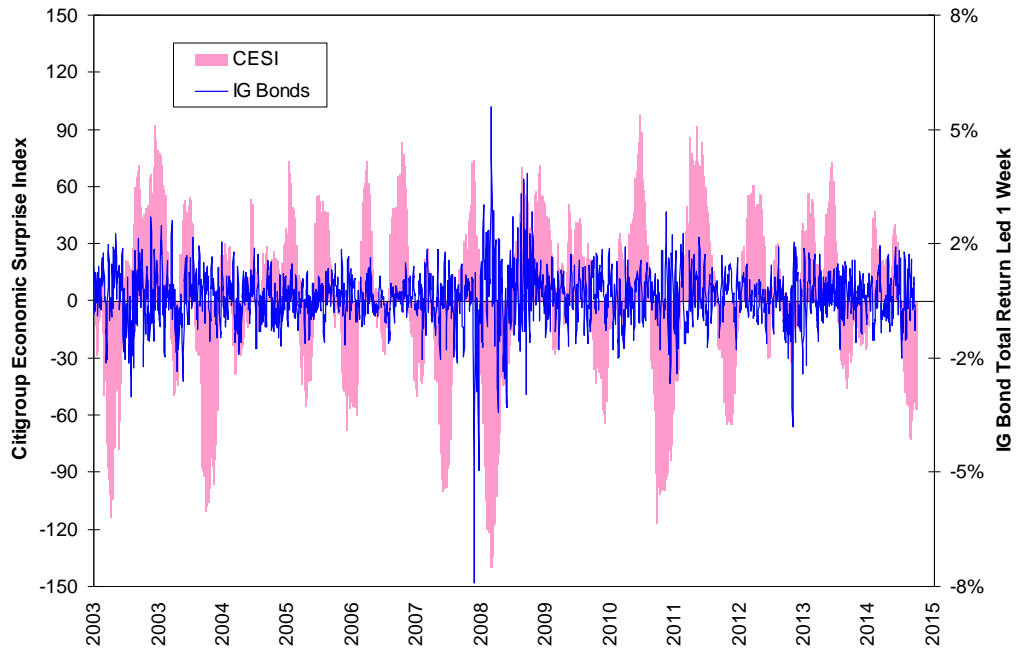


Finally, the relationship between the two corporate bond indices and the CESI are nearly random. We should not be surprised given the expected negative relationship between the corporate bonds' risk-free rate exposure and the CESI and the expected positive relationship between their credit-risk exposure and the CESI. If we combine these divergent relationships with changes in monetary policy we should expect a non-relationship, and that is exactly what we see.

High-Yield Bond Response To Economic Surprise Index



Investment-Grade Bond Response To Economic Surprise Index



None of this should be, um, surprising. Markets are extremely efficient at incorporating new economic data into existing prices, intermarket spreads and forward curves. While the efficient market hypothesis is easy to lampoon in light of intraday noise, the tendency toward efficiency over time is profound.

Moreover, while the efficient market hypothesis states in its strong form markets incorporate all information public and private into prices, it is silent on the arrival of new information. Why anyone should expect a deviation from a current consensus to have a persistent impact over any time period with a continuous inflow of new information is mystifying.

In addition, economists and analysts are herding animals. While there are rewards for being right, there are penalties for deviating too far from the consensus. This works to narrow the potential range of outcomes and to increase the probability of the actual news being a “surprise.” You are free to ponder whether classifying an economic report you missed by a country mile as a “surprise” reduces career risk or not.